

WHAT IS CLAIMED IS:

1. A piezoelectric body comprising a conductive powder compact comprising a conductive polymer and a dopant, and an ion donor, whereby an electromotive force is generated by stress change.
2. The piezoelectric body according to claim 1, wherein said conductive polymer has a conjugated structure.
3. The piezoelectric body according to claim 1 or 2, wherein said conductive polymer is at least one selected from the group consisting of polypyrrole, polythiophene, polyaniline, polyacetylene and their derivatives.
4. The piezoelectric body according to any one of claims 1-3, wherein said ion donor is in the form of a solution, a sol, a gel or a combination thereof.
5. The piezoelectric body according to any one of claims 1-4, wherein said ion donor functions as a binder.
6. The piezoelectric body according to any one of claims 1-5, wherein said ion donor contains an amphiphatic compound.
7. The piezoelectric body according to any one of claims 1-6, wherein the amount of said conductive polymer in said conductive powder is 1-99.9% by mass.
8. The piezoelectric body according to any one of claims 1-7, wherein said conductive powder has electric resistance of $10^{-7} \Omega$ to $1 \text{ M}\Omega$.
9. The piezoelectric body according to any one of claims 1-8, wherein said conductive polymer has an average particle size of 10 nm to 1 mm.
10. An electric generator comprising the piezoelectric body recited in any one of claims 1-9, and a means for changing stress applied to said powder compact, wherein said ion donor is released from and/or absorbed by said powder compact by compressing and/or extending said powder compact with said stress-changing means so as to generate said

electromotive force.

11. A polymer actuator comprising the piezoelectric body recited in any one of claims 1-9, a work electrode and a counter electrode, wherein said work electrode is in contact with said powder compact, wherein said counter electrode is disposed at a position separate from said powder compact in said ion donor, whereby said powder compact contracts or extends when voltage is applied between said work electrode and said counter electrode.

12. The polymer actuator according to claim 11 comprising plural powder compacts arranged in tandem in said ion donor.

13. An energy-generating/recovering system comprising at least a pair of the polymer actuators recited in claim 11 or 12, wherein the contraction or extension of one powder compact is transmitted to the other powder compact to change its stress, so that the other powder compact generates an electromotive force.